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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re application of: HO et al.

Attorney Docket No.:  
LAM1P152D1/P0692D

Application No.: Filed Herewith

Examiner: Unassigned

Filed: Herewith

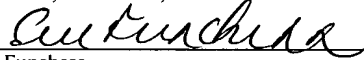
Group: Unassigned

Title: USE OF AMMONIA FOR ETCHING  
ORGANIC LOW-K DIELECTRICS

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CERTIFICATE OF EXPRESS MAILING

I hereby certify that this paper and the documents and/or fees referred to as attached therein are being deposited with the United States Postal Service on January 21, 2004 in an envelope as "Express Mail Post Office to Addressee" service under 37 CFR §1.10, Mailing Label Number **ER562285880US**, addressed to: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

  
Sue Funchess

**INFORMATION DISCLOSURE STATEMENT**  
**37 CFR §§1.56 AND 1.97(b)**

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Dear Sir:

The references listed in the attached PTO Form 1449 may be material to examination of the above-identified patent application. Applicants submit the list of these references in compliance with their duty of disclosure pursuant to 37 CFR §§1.56 and 1.97. The Examiner is requested to make these references of official record in this application. The above-identified application is a divisional application of prior application U.S. Patent Application No. 09/782,446. This prior application is being relied upon for an earlier filing date under 35 U.S.C. § 120. Because the listed references were either cited by the PTO, or submitted to the PTO in the prior application, under 37 CFR § 1.98(d) Applicants submit that copies need not be provided.

This Information Disclosure Statement is not to be construed as a representation that a search has been made, that additional information material to the examination of this application does not exist, or that these references indeed constitute prior art.

This Information Disclosure Statement is: (i) filed within three (3) months of the filing date of the above-referenced application, (ii) believed to be filed before the mailing date of a first Office Action on the merits, or (iii) believed to be filed before the mailing of a first Office Action after the filing of a Request for Continued Examination under §1.114. Accordingly, it is believed that no fees are due in connection with the filing of this Information Disclosure Statement. However, if it is determined that any fees are due, the Commissioner is hereby authorized to charge such fees to Deposit Account 50-0388 (Order No. LAM1P152D1).

Respectfully submitted,

BEYER WEAVER & THOMAS, LLP

A handwritten signature in black ink, appearing to read "Michael Lee", with a stylized, cursive script.

Michael Lee

Registration No. 31,846

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<b>Form 1449 (Modified)</b>  <b>Information Disclosure Statement By Applicant</b>  (Use Several Sheets if Necessary)	Atty Docket No. <b>LAM1P152D1/P0692D</b>	Application No.: <b>Filed Herewith</b>
	Applicant: <b>HO et al.</b> Filing Date <b>Herewith</b>	Group <b>Unassigned</b>

### U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	A	5,230,772	07/27/93	Kadomura	156	643	07/25/91
	B	5,266,157	11/30/93	Kadomura	156	659.1	10/03/91
	C	5,741,396	04/21/98	Loewenstein	156	643.1	04/29/94
	D	5,814,563	09/29/98	Ding et al.	438	714	06/12/96
	E	5,877,032	03/02/99	Guinn et al.	438	9	08/27/96
	F	5,970,376	10/19/99	Chen	438	637	12/29/97
	G	6,037,255	03/14/00	Hussein et al.	438	675	05/12/99
	H	6,040,248	03/21/00	Chen et al.	438	725	06/24/98
	I	6,080,529	06/27/00	Ye et al.	430	318	10/19/98

### Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
	J	01/04707A1	01/18/01	WIPO	H01L	21/311	Yes	
	K	01/29879A2	04/26/01	WIPO	H01L	N/A	Yes	
	L	01/59825A1	08/16/01	WIPO	H01L	21/311	Yes	
	M	0851474A2	07/01/98	EPO	H01L	21/321	Yes	
	N	09036089	02/07/97	Japan	H01L	21/3065	Abs.	

### Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
	O	Delsol et al., "Transformer Coupled Plasma Dielectric Etch for 0.25 $\mu$ m Technologies", Microelectronic Engineering 50 (2000), pages 75-80
	P	Eto et al., "High Selectivity Photoresist Ashing by the Addition of NH <sub>3</sub> to CF <sub>4</sub> /O <sub>2</sub> or CHF <sub>3</sub> /O <sub>2</sub> ", SID 1999 Digest, pages 844-847
	Q	Hasegawa et al., "Copper Dual Damascene Interconnects with Low-K ( $K_{eff} < 3.0$ ) Dielectrics Using FLARE <sup>TM</sup> and an Organo-Silicate Hard Mask", 1999 IEEE, pages 26.4.1. – 26.4.4.
Examiner		Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<b>Form 1449 (Modified)</b>  <b>Information Disclosure Statement By Applicant</b>  (Use Several Sheets if Necessary)	Atty Docket No.	Application No.:
	<b>LAM1P152D1/P0692D</b>	<b>Filed Herewith</b>
	Applicant:	
	<b>HO et al.</b>	
	Filing Date	Group
	<b>Herewith</b>	<b>Unassigned</b>

### U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	AA	6,105,588	08/22/00	Li et al.	134	1.1	05/27/98
	BB	6,124,213	09/26/00	Usami et al.	438	710	11/17/98
	CC	6,153,511	11/28/00	Watatani	438	623	06/25/99
	DD	6,174,796B1	01/16/01	Takagi et al.	438	622	12/30/98
	EE	6,194,128B1	02/27/01	Tao et al.	430	313	09/17/98
	FF	6,245,663B1	06/12/01	Zhao et al.	438	622	09/30/98
	GG	6,352,918B1	03/05/02	Huang et al.	438	623	11/24/98
	HH	6,352,937B1	03/05/02	Kadomura et al.	438	725	04/27/98
	II	6,355,572B1	03/12/02	Ikegami	438	706	03/06/00

### Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
	JJ							
	KK							
	LL							
	MM							
	NN							

### Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
	OO	Lin et al., "Microwave Imaging of Cerebral Edema", Proceedings of the IEEE, Vol. 70, No. 5, May 1982, pages 523-524
	PP	Plummer et al., "Silicon VLSI Technology – Fundamentals, Practice and Modeling", Department of Electrical Engineering, Stanford University (2000), page 639
	QQ	International Search Report, dated November 20, 2002
Examiner		Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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	Filing Date	Group
	<b>Herewith</b>	<b>Unassigned</b>

#### U.S. Patent Documents

Examiner Initial	No.	Patent No.	Date	Patentee	Class	Sub-class	Filing Date
	AAA	6,620,733B2	09/16/03	Ho	438	700	02/12/01
	BBB						
	CCC						
	DDD						
	EEE						
	FFF						
	GGG						
	HHH						
	III						

#### Foreign Patent or Published Foreign Patent Application

Examiner Initial	No.	Document No.	Publication Date	Country or Patent Office	Class	Sub-class	Translation	
							Yes	No
	JJJ							
	KKK							
	LLL							
	MMM							
	NNN							

#### Other Documents

Examiner Initial	No.	Author, Title, Date, Place (e.g. Journal) of Publication
	OOO	International Search Report, dated December 12, 2002
	PPP	International Search Report, dated July 22, 2003
	QQQ	
Examiner		Date Considered

Examiner: Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.